

EAST SEARCH / INTERFERENCE SEARCH

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	31	levosalbutamol	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L2	75321	hydrogenation	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L3	75321	I2 and I2	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L4	3	I2 and I1	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L5	45877	rhodium	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L6	5216	I5 and phosphine	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L7	3	I6 and I1	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17

=> d his

(FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

FILE 'CAPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005
L1 0 S SALBUTAMONE

FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005
L2 1 S E2
E SALBUTAMONE/CN
L3 1 S E3
E SALBUTAMOL/CN

FILE 'CAPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005
L4 5 S L2 AND L3

FILE 'REGISTRY' ENTERED AT 12:06:44 ON 07 DEC 2005
L5 1 S E4
E LEVOSABUTAMOL/CN

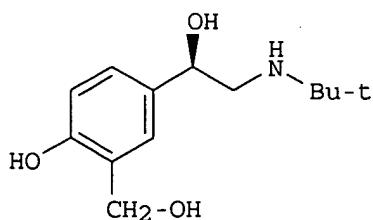
FILE 'CAPLUS' ENTERED AT 12:07:18 ON 07 DEC 2005

FILE 'REGISTRY' ENTERED AT 12:07:20 ON 07 DEC 2005

FILE 'CAPLUS' ENTERED AT 12:07:33 ON 07 DEC 2005
L6 19 S L5/P
L7 37 S HYDROGENATION
L8 169937 S HYDROGENATION
L9 2 S L8 AND L6
L10 66908 S RHODIUM
L11 66644 S PHOSPHINE
L12 20 S L11 AND L10
L13 0 S L12 AND L6

=> d bib abs 16

L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:558824 CAPLUS
DN 143:153146
TI New process for preparing L-salbutamol
IN Chen, Jianlong
PA Suzhou Junning New Medicine Developing Center Co., Ltd., Peop. Rep. China;
Shanghai GLSynthesis Co. Ltd.
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
----- ----- ----- -----
PI CN 1413976 A 20030430 CN 2002-131215 20020913
PRAI CN 2002-131215 20020913
GI

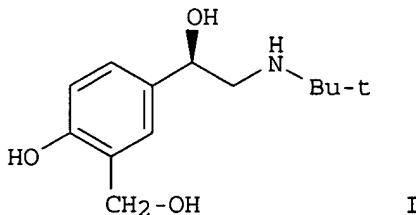


AB L-Salbutamol (I) is prepared stereoselectively from 4-hydroxybenzaldehyde via hydroxymethylation, protection of hydroxy groups, Wittig reaction of formyl group to form the styrene derivative intermediate which undergoes enantioselective dihydroxylation with Ad-mix- β , conversion of primary hydroxyl to tosylate and finally substituted with tert-butylamine. The other stereoisomer can be prepared by changing the catalyst for the asym. dihydroxylation step.

=> d bib abs 16 1-19

L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2005:558824 CAPLUS
 DN 143:153146
 TI New process for preparing L-salbutamol
 IN Chen, Jianlong
 PA Suzhou Junning New Medicine Developing Center Co., Ltd., Peop. Rep. China; Shanghai GLSynthesis Co. Ltd.
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1413976	A	20030430	CN 2002-131215	20020913
PRAI	CN 2002-131215		20020913		
GI					



AB L-Salbutamol (I) is prepared stereoselectively from 4-hydroxybenzaldehyde via hydroxymethylation, protection of hydroxy groups, Wittig reaction of formyl group to form the styrene derivative intermediate which undergoes enantioselective dihydroxylation with Ad-mix- β , conversion of primary hydroxyl to tosylate and finally substituted with tert-butylamine. The other stereoisomer can be prepared by changing the catalyst for the asym. dihydroxylation step.

L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:760306 CAPLUS
 DN 141:401083
 TI Enantiomeric separation of basic compounds using heptakis(2,3-di-O-methyl-6-O-sulfo)- β -cyclodextrin in combination with potassium camphorsulfonate in nonaqueous capillary electrophoresis: Optimization by means of an experimental design
 AU Servais, Anne-Catherine; Fillet, Marianne; Chiap, Patrice; Dewe, Walthere; Hubert, Philippe; Crommen, Jacques
 CS Department of Analytical Pharmaceutical Chemistry, Institute of Pharmacy, University of Liege, Liege, Belg.
 SO Electrophoresis (2004), 25(16), 2701-2710
 CODEN: ELCTDN; ISSN: 0173-0835

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

AB The enantiomeric separation of a series of basic pharmaceuticals (β -blockers, local anesthetics, sympathomimetics) has been investigated in nonaq. capillary electrophoresis (NACE) systems using heptakis(2,3-di-O-methyl-6-O-sulfo)- β -cyclodextrin (HDMS- β -CD) in combination with potassium camphorsulfonate (camphorSO₃⁻). For this purpose, a face-centered central composite design with 11 exptl. points was applied. The effect of the concns. of HDMS- β -CD and camphorSO₃⁻ on enantioresoln. was statistically evaluated and depended largely on the considered analyte. The presence of camphorSO₃⁻ was found to be particularly useful for the enantiosepn. of compds. with high affinity for the anionic CD. CamphorSO₃⁻ seems to act as a competitor, reducing the affinity for the CD, probably by ion-pair formation with these analytes. For compds. with lower affinity for HDMS- β -CD, the combination of camphorSO₃⁻ and the CD appeared to have a favorable effect on enantioresoln. only if the optimal CD concentration could be reached. On the other hand, for compds. characterized by a very low affinity for the anionic CD, the association of camphorSO₃⁻ and HDMS- β -CD is always unfavorable. Finally, exptl. conditions were selected by means of the multivariate approach in order to obtain the highest resolution (Rs) value for each studied compound

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:425522 CAPLUS

DN 142:55631

TI The exploration of promising compounds powered by the synthetic design system

AU Oka, Noriko; Tanaka, Akio

CS Sumika Tech. Inf. Serv., Inc., Osaka, 554-8558, Japan

SO Joho Kanri (2004), 47(2), 73-81

CODEN: JOKAAB; ISSN: 0021-7298

PB Kagaku Gijutsu Shinko Kiko

DT Journal

LA Japanese

AB For exploration of promising intermediates in fine chemical industry, a new method using a computer-aided system for synthesis design, SYNSUP, is presented. The synthesis design system is utilized to generate promising intermediates. The promising intermediates are included in the common intermediates, which have >1 different target compds. As compared with the current ongoing chemical process, the facility and validity of the proposed intermediates were evaluated with respect to candidates for new intermediates. Consequently, it was cleared that the extracted intermediates contained not only the reported intermediates but also the new ones. The new tactics is very powerful to find new promising intermediates among various chemical compds. In addition, the total system including SYNSUP and extraction of common intermediates is automatically executed to a huge amount

of chems. in a computer, although the similar operation is impossible by manual.

L6 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:291042 CAPLUS

DN 140:303395

TI Procedure for the preparation of (R)-salbutamol by asymmetric hydrogenation of salbutamol using rhodium and chiral divalent phosphine catalysts

IN Kreye, Paul; Lehnhart, Alfons; Klingler, Franz Dietrich

PA Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany

SO Ger., 6 pp.

CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10249576	B3	20040408	DE 2002-10249576	20021024
	CA 2503439	AA	20040506	CA 2003-2503439	20031018
	WO 2004037767	A1	20040506	WO 2003-EP11583	20031018
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1585718	A1	20051019	EP 2003-773653	20031018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2005009926	A1	20050113	US 2003-692060	20031023
	PRAI	DE 2002-10249576	A	20021024	
		US 2003-499514P	P	20030902	
	WO 2003-EP11583	W	20031018		

OS CASREACT 140:303395

AB (R)-salbutamol (levosalbutamol) was prepared by asym. hydrogenation of salbutamol (4-hydroxy-3-hydroxymethylphenyl tert-butylaminomethyl ketone) using rhodium and chiral divalent phosphine catalysts. Thus, a mixture of salbutamol, Et₃N, (RhCODCl)₂, and (2R,4R)-4-dicyclohexylphosphino-2-diphenylphosphinomethyl-N-methylaminocarbonylpyrrolidine in MeOH/PhMe was stirred 23 h at 50° under 20 bar H₂ to give 90% (R)-salbutamol in 70% enantiomeric excess.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:465958 CAPLUS
DN 137:47001
TI Process for preparing and resolving the optical enantiomers of salbutamol
IN Hamied, Yusuf Khwaja; Kankan, Rajendra Narayanrao; Rao, Dharmaraj
Ramachandra
PA Cipla Limited, India; Wain, Christopher Paul
SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002048090	A1	20020620	WO 2001-GB5444	20011210
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2431400	AA	20020620	CA 2001-2431400	20011210
	AU 2002020918	A5	20020624	AU 2002-20918	20011210

EP 1349828 A1 20031008 EP 2001-270520 20011210
 EP 1349828 B1 20050316
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 AT 291006 E 20050415 AT 2001-270520 20011210
 PT 1349828 T 20050729 PT 2001-270520 20011210
 ES 2240335 T3 20051016 ES 2001-1270520 20011210
 US 2004054215 A1 20040318 US 2003-450155 20030915
 HK 1060345 A1 20050624 HK 2004-102315 20040330
 PRAI GB 2000-30171 A 20001211
 WO 2001-GB5444 W 20011210
 OS CASREACT 137:47001
 AB A process for making optically pure (R)- and (S)-salbutamol comprises obtaining the (R)- or (S)-isomer of either salbutamol or a salbutamol precursor (e.g., 4-benzyl albuterol) in substantially optically pure form by resolving a racemic or optically impure mixture of enantiomers of salbutamol or of said precursor with either (L)- or (D)-tartaric acid, and where necessary converting the isomer of the precursor into either (R)- or (S)-salbutamol, resp., and then optionally converting them into a pharmaceutically acceptable salt.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:532121 CAPLUS
 DN 135:92436
 TI Process for preparing beta-adrenoceptor agonists by combination and disconnection method
 IN Deng, Jingen; Peng, Xiaohua; Hua, Zhengmao; Wu, Tongfei; Fu, Fangmin; Cui, Xin; Yang, Liping
 PA Chengdu Inst. of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China
 SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 14 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1273966	A	20001122	CN 1999-117313	19991019
PRAI	CN 1999-117313		19991019		
AB	Racemic beta-adrenoceptor agonist is resolved by complexing with chiral resolving agent in organic solvent under refluxing for 5 min-6 h, crystallizing for 1-40 h, filtering, and salifying with inorg. acid. The chiral resolving agent is D-tartaric acid or dibenzoyl-D-tartaric acid and its derivs. The organic solvent is alc., ketone, and/or Et acetate. The process is used for optical resolution of albuterol, terbutaline, metaproterenol, isoproterenol, epinephrine, clenbuterol, bitolterol, bambuterol, salmeterol, and cimaterol.				

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:665746 CAPLUS
 DN 132:6266
 TI Racemic switches. Historical perspectives and current status
 AU Cannarsa, Michael J.
 CS PPG-Sipsy Chemical Co., West Chester, PA, 19382, USA
 SO Chimica Oggi (1999), 17(9), 28-32
 CODEN: CHOGDS; ISSN: 0392-839X
 PB TeknoScienze
 DT Journal; General Review
 LA English
 AB A review with 6 refs., describing historical development of asym.

synthesis technol. and recent developments in racemic switches of perprazole, fluoxetine, D-methylphenidate, levalbuterol, levobupivacaine, citalopram, cetirizine, norcisapride-(+), zopiclone, and formoterol-(R,R). The single enantiomers (S)-ibuprofen, dexketoprofen, dextrofluoramine, and verapamil continue to struggle for a place in the market.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:549269 CAPLUS
DN 131:184952
TI Preparation of optically enriched (R)- or (S)-albuterol via resolution of 2-(N-tert-butylamino)-1-(2,2-dimethyl-1,2-benzodioxin-6-yl)ethanol using a chiral tartaric acid derivative.
IN Stevens, Anne; Hunter, Roger; Nassimbeni, Luigi; Caira, Mino; Scott, Janet; Clauss, Rainer; Gibson, Joanne; Grimmacher, Tarron
PA Fine Chemicals Corporation (Proprietary) Limited, S. Afr.; Howden, Christopher Andrew
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9942460	A1	19990826	WO 1999-GB518	19990219
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 9900977	A	20000404	ZA 1999-977	19990208
	CA 2320756	AA	19990826	CA 1999-2320756	19990219
	AU 9925393	A1	19990906	AU 1999-25393	19990219
	EP 1056740	A1	20001206	EP 1999-905097	19990219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6365756	B1	20020402	US 2000-622946	20001113
PRAI	ZA 1998-1428	A	19980220		
	WO 1999-GB518	W	19990219		
OS	CASREACT 131:184952				
AB	2-(N-tert-butylamino)-1-(2,2-dimethyl-1,2-benzodioxin-6-yl)ethanol (I) was prepared by suspending albuterol or a salt thereof in acetone, adding a suitable acid, adding a suitable aqueous or nonaq. basic solution, and recovery of I. Thus, (R,S)-albuterol in acetone was treated with dropwise with $\text{BF}_3\cdot\text{Et}_2\text{O}$ under ice cooling followed by 1 h stirring to give 96% I. The latter was resolved using (2S,3S)-(+)-di-O-benzoyltartaric acid followed by hydrolysis in aqueous HOAc to give (R)-albuterol acetate.				

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:524540 CAPLUS
DN 131:310601
TI Resolution of albuterol acetonide
AU Caira, Mino R.; Hunter, Roger; Nassimbeni, Luigi R.; Stevens, Anne T.
CS Department of Chemistry, University of Cape Town, Rondebosch, 7701, S. Afr.
SO Tetrahedron: Asymmetry (1999), 10(11), 2175-2189

PB CODEN: TASYE3; ISSN: 0957-4166
Elsevier Science Ltd.
DT Journal
LA English
AB The (R)-enantiomer of albuterol has been isolated via resolution of albuterol acetonide with (2S,3S)-di-O-benzoyl- or (2S,3S)-di-O-toluoyltartaric acid. Said acetonide is α -[(1,1-dimethylethyl)amino]methyl]-2,2-dimethyl-4H-1,3-benzodioxin-6-methanol. The absolute configuration of the resolved acetonide was assessed by 1 H NMR anal. of its (R)-Mosher's ester, and confirmed by an X-ray crystal structure determination of the (R)-phenylethylurea derivative of the (S)-enantiomer.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:283528 CAPLUS
DN 129:14067
TI Resolution of salbutamol enantiomers in human urine by reversed-phase high performance liquid chromatography after derivatization with 2,3,4,6-tetra-O-acetyl- β -D-glucopyranosyl isothiocyanate
AU Kim, Kyeong Ho; Kim, Tae Kyun
CS College Pharmacy, Kangwon National University, Chunchon, 200-701, S. Korea
SO Archives of Pharmacal Research (1998), 21(2), 217-222
CODEN: APHRDQ; ISSN: 0253-6269
PB Pharmaceutical Society of Korea
DT Journal
LA English
AB A stereospecific HPLC method has been developed for the resolution of the enantiomers of salbutamol in human urine. After solid-phase extraction and derivatization with 2,3,4,6-tetra-O-a-cetyl- β -D-glucopyranosyl isothiocyanate, the diastereomeric derivs. were resolved ($Rs=1.83$) on 5 μ m octadecylsilan column using 35% acetonitrile in 0.05M ammonium acetate buffer ($pH=6$) as a mobile phase with electrochem. detection. The diastereomeric derivs. were formed within 30 min. The detection limit of each enantiomer was 20 ng/mL ($S/N=3$).

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:417483 CAPLUS
DN 127:99905
TI Enantiomeric separation of racemic methyl phenidate and albuterol with cyclodextrins by capillary zone electrophoresis
AU Ruan, Zongqin; Yuan, Min; Ou, Qingyu; Yu, Weile
CS Lanzhou Inst. Chem. Phys. Acad. Sin., Lanzhou, 730000, Peop. Rep. China
SO Fenxi Huaxue (1997), 25(6), 743
CODEN: FHHHDT; ISSN: 0253-3820
PB Zhongguo Huaxuehui "Fenxi Huaxue" Bianji Weiyuanhui
DT Journal
LA Chinese
AB Enantiomers of racemic Me phenidate and albuterol were separated with cyclodextrins by capillary zone electrophoresis and determined by UV detector at 214 and 210 nm, resp.

L6 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:524390 CAPLUS
DN 125:167556
TI Enantioselective preparation of optically pure albuterol
IN Gao, Yun; Zepp, Charles M.
PA Sepracor, Inc., USA
SO U.S., 7 pp., Cont.-in-part of U.S. 5,399,765.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5545745	A	19960813	US 1995-376072	19950120
	US 5399765	A	19950321	US 1994-247302	19940523
	CA 2190577	AA	19951130	CA 1995-2190577	19950523
	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9525559	A1	19951218	AU 1995-25559	19950523
	AU 686386	B2	19980205		
	EP 763010	A1	19970319	EP 1995-919913	19950523
	EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500954	T2	19980127	JP 1995-530513	19950523
	AT 195931	E	20000915	AT 1995-919913	19950523
	ES 2151065	T3	20001216	ES 1995-919913	19950523
	PT 763010	T	20001229	PT 1995-919913	19950523
	GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI	US 1994-247302	A2	19940523		
	US 1995-376072	A	19950120		
	WO 1995-US6539	W	19950523		
AB	(R)-albuterol is prepared by the resolution of a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-(phenylmethoxy)benzoate or α -[(1,1-dimethylethyl)amino]methyl]-4-(phenylmethoxy)-1,3-benzenedimethanol using a chiral acid such as (+/-) di-toluoyltartaric acid or (+/-) di-benzoyltartaric acid, cooling the solution so that primarily one enantiomer crystallizes, treating the diastereomeric salt with a base to liberate the enantiomer free base, reducing the enantiomer, debenzylating the enantiomer in the case of the benzyl derivative, and recovering a single enantiomer of albuterol (e.g., the R enantiomer). Preliminary research indicates that administration of the pure R-enantiomer may offer an improved therapeutic ratio.				

L6 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:175602 CAPLUS

DN 124:232035

TI Enantioselective preparation of optically pure albuterol

IN Gao, Yun; Zepp, Charles Melvyn

PA Sepracor, Inc., USA

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5399765	A	19950321	US 1994-247302	19940523

US 5545745	A	19960813	US 1995-376072	19950120
AU 9525559	A1	19951218	AU 1995-25559	19950523
AU 686386	B2	19980205		
EP 763010	A1	19970319	EP 1995-919913	19950523
EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE			
JP 10500954	T2	19980127	JP 1995-530513	19950523
AT 195931	E	20000915	AT 1995-919913	19950523
GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI US 1994-247302	A	19940523		
US 1995-376072	A	19950120		
WO 1995-US6539	W	19950523		

OS CASREACT 124:232035

AB This invention relates to a method for producing albuterol by the resolution of a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate using di-toluoyltartaric acid. The invention further relates to a method for producing albuterol by the resolution of a mixture of enantiomers of α -[(1,1-dimethylethyl)amino]methyl]-4-(phenylmethoxy)-1,3-benzenedimethanol, etc, using a chiral acid. This invention provides an economical process for making optically pure albuterol.

L6 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:795449 CAPLUS

DN 124:55545

TI Asymmetric synthesis of (R)- and (S)-arylethanolamines from imino ketones

IN Gao, Yun; Hong, Yaping; Zepp, Charles M.

PA Sepracor, Inc., USA

SO U.S., 7 pp.

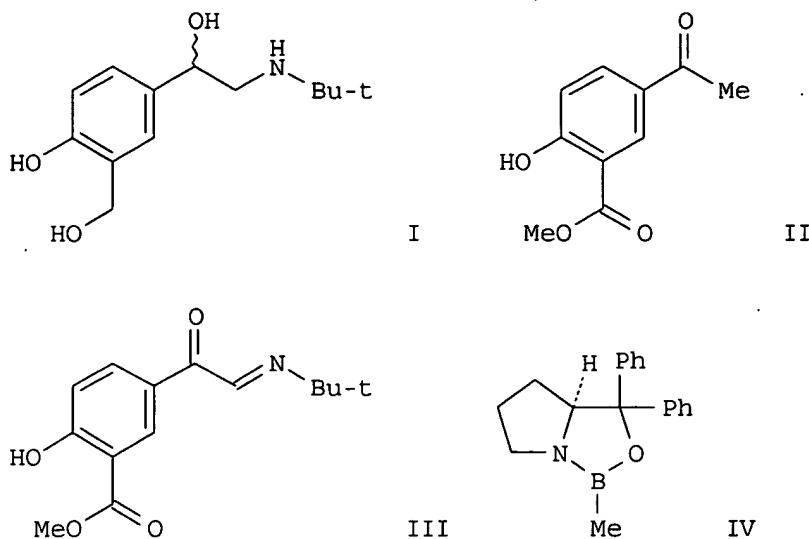
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	-----	-----	-----	-----	-----
PI	US 5442118	A	19950815	US 1994-231231	19940422
	CA 2188027	AA	19951102	CA 1995-2188027	19950420
	WO 9529146	A1	19951102	WO 1995-US4869	19950420
		W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9523913	A1	19951116	AU 1995-23913	19950420
	AU 685274	B2	19980115		
	EP 766662	A1	19970409	EP 1995-917086	19950420
		R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE			
	JP 10501794	T2	19980217	JP 1995-527762	19950420
PRAI	US 1994-231231	A	19940422		
	WO 1995-US4869	W	19950420		
OS	CASREACT 124:55545; MARPAT 124:55545				
GI					



AB A method for enantioselective reduction of α -imino ketones to α -amino alcs. is disclosed. The method uses a borane reducing agent, and a chiral 1,3,2-oxazaborole derivative as catalyst. The method is applied to the synthesis of (R)-albuterol [(R)-I] from Me 5-acetylsalicylate (II) in high yield and high optical purity. For example, II was α -oxidized with aqueous HBr and DMSO to give the corresponding glyoxal (crude, 80%), which was condensed with tert-BuNH₂ to give imino ketone III (63%). Then, III and BH₃.SMe₂ in anhydrous PhMe were slowly added (3 h) at 0° to 10 mol% catalyst IV in anhydrous PhMe. Stirring, refluxing, quenching with MeOH, and workup gave (S)-albuterol, i.e. (S)-I, in >90% yield and 93-95% enantiomeric excess (ee). Optimization of the process, and applicability to other β -blockers and β -agonists, are reported and/or discussed.

L6 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:713767 CAPLUS

DN 123:111660

TI Enantioselective preparation of optically pure albuterol via resolution of methyl 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate with ditoluoyltartaric acid

IN Gao, Yun; Zepp, Charles M.

PA Sepracor, Inc., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5399765	A	19950321	US 1994-247302	19940523
	US 5545745	A	19960813	US 1995-376072	19950120
	CA 2190577	AA	19951130	CA 1995-2190577	19950523
	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9525559	A1	19951218	AU 1995-25559	19950523

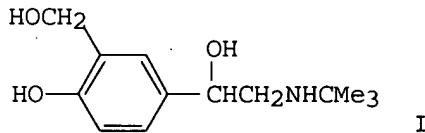
AU 686386 B2 19980205
EP 763010 A1 19970319 EP 1995-919913 19950523
EP 763010 B1 20000830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 10500954 T2 19980127 JP 1995-530513 19950523
AT 195931 E 20000915 AT 1995-919913 19950523
ES 2151065 T3 20001216 ES 1995-919913 19950523
PT 763010 T 20001229 PT 1995-919913 19950523
GR 3034982 T3 20010228 GR 2000-402605 20001124
PRAI US 1994-247302 A2 19940523
US 1995-376072 A 19950120
WO 1995-US6539 W 19950523
OS CASREACT 123:111660
AB A method for obtaining a single enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate (albuterol precursor) comprising the steps of: (a) dissolving a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate and a chiral acid selected from the group consisting of (-)-di-toluoyl-L-tartaric acid and (+)-di-toluoyl-D-tartaric acid in methanol by heating to form a solution; (b) allowing said solution to cool, whereby a salt of primarily one stereoisomer crystallizes; (c) separating said salt from said solution; (d) recrystg. said salt from methanol, whereby a diastereomeric salt having greater than 90% ee of an enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate is obtained (e) separating said diastereomeric salt from the methanol solvent; and (f) liberating said enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate from said diastereomeric salt by treatment with base. Thus, e.g., a mixture of phenolic precursor Me (\pm)-5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate and (+)-di-p-toluoyl-D-tartaric acid afforded a 53% yield (93% ee) of Me (R)-5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate diastereomeric salt; a single recrystn. afforded 33% yield of 99% ee (R) diastereomeric salt.

L6 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:262742 CAPLUS
DN 122:105510
TI Synthetic applications of optically active cyanohydrins. Enantioselective syntheses of the hydroxy amides tembamide and aegeline, the cardiac drug denopamine, and some analogs of the bronchodilator salbutamol
AU Brown, Roger F. C.; Donohue, Andrew C.; Jackson, W. Roy; McCarthy, Tom D.
CS Department Chemistry, Monash University, Clayton, 3168, Australia
SO Tetrahedron (1994), 50(48), 13739-52
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier
DT Journal
LA English
OS CASREACT 122:105510
AB The natural hydroxy amides, (-)-tembamide and (-)-aegeline, and the cardiac drug (-)-denopamine have been prepared in homochiral form in good overall yield (>65%) from p-methoxy- or p-allyloxybenzaldehyde by synthetic sequences involving enantioselective hydrocyanation of the aldehydes. Similar chemical has been used to prepare analogs of the bronchodilator(-)-salbutamol both in high yield and with good enantiomeric excess.

L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:644916 CAPLUS
DN 121:244916
TI Chiral separation of salbutamol enantiomers in human plasma
AU Seo, Joung Min; Kim, Kyeong Ho
CS Coll. Pharm., Kangwon Natl. Univ., Kangwon-do, 200-701, S. Korea
SO Archives of Pharmacal Research (1994), 17(4), 244-8

CODEN: APHRDQ; ISSN: 0253-6269
 DT Journal
 LA English
 AB A stereoselective and sensitive high performance liquid chromatog. using fluorescence detector was examined for the determination of R(-) and S(+) - salbutamol
 in human plasma. Solid phase extraction method using silica as sorbent was used to extract salbutamol racemates from plasma. After fractionation and freeze-drying of the eluates containing salbutamol racemates, they were separated and quantified on a chiral stationary column. The detection limit of each enantiomer was 2 ng/mL in human plasma (S/N = 3).

L6 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1981:400170 CAPLUS
 DN 95:170
 TI Urinary excretion of salbutamol enantiomers in man by stable isotope tracer technique
 AU Baba, Shigeo; Goromaru, Tsuyoshi; Kawaguchi, Izumi; Kishi, Keisuke
 CS Tokyo Coll. Pharm., Hachioji, Japan
 SO Iyakuhin Kenkyu (1981), 12(1), 84-90
 CODEN: IYKEDH; ISSN: 0287-0894
 DT Journal
 LA Japanese
 GI



AB Salbutamol (I) [18559-94-9], used as a bronchodilator, is a mixture of S(+) - [34271-50-6] and R(-) - [34391-04-3] isomers; the activity of the R(-)-isomer is 64 times higher than that of S(+) - isomer. The excretion of I enantiomers in man was studied by a stable isotope tracer technique. An equimolar mixture of S(+) - and R(-)-I was administered orally to 2 healthy volunteers and the urine was collected for 24 h. The percentage of the dose excreted as unchanged S(+) - and R(-)-isomers were, resp., 28.9 and 15.7% in subject 1, and 51.7 and 15.7% in subject 2. The elimination rate consts. of the 2 isomers were almost the same in each subject.

L6 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1972:59211 CAPLUS
 DN 76:59211
 TI Optical enantiomers of α -tert-butylaminomethyl-4-hydroxy- α -xylylene- α , α' -diol
 IN Middlemiss, David
 PA Allen and Hanburys Ltd.
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2128258	A	19711223	DE 1971-2128258	19710607
	DE 2128258	C2	19830811		
	GB 1298494	A	19721206	GB 1970-29367	19700617
	IL 36927	A1	19740114	IL 1971-36927	19710520

CA 984854	A1	19760302	CA 1971-113450	19710520
ZA 7103298	A	19720126	ZA 1971-3298	19710521
BE 768120	A1	19711206	BE 1971-104266	19710604
ES 392008	A1	19740801	ES 1971-392008	19710607
JP 55025181	B4	19800704	JP 1971-40262	19710609
AT 309403	B	19730827	AT 1971-5101	19710614
DK 130920	B	19750505	DK 1971-2940	19710616
NL 7108368	A	19711221	NL 1971-8368	19710617
NL 173635	B	19830916		
NL 173635	C	19840216		
FR 2100772	A5	19720324	FR 1971-22011	19710617
FR 2100772	B1	19750606		
CH 553746	A	19740913	CH 1971-8862	19710617
PRAI GB 1970-29367	A	19700617		
AB	The optical enantiomers of the title compound 4,3-HO(HOCH ₂)C ₆ H ₃ -CH(OH)CH ₂ NHBu-tert (I), useful as adrenergic β -receptor stimulating agents, were prepared by resolution of 4,3-PhCH ₂ O-(MeO ₂ C)C ₆ H ₃ CH(OH)CH ₂ N(CH ₂ Ph)Bu-tert (II) with O,O'-di-p-toluyltartaric acid (III), fractional crystallization of the salt, and reduction and catalytic debenzylation of the base. Thus, reaction of 30 g racemic II and 25.6 g (+)-III in AcOEt at 70° gave 27 g (+)-salt, which was converted with NaHCO ₃ into 3 g (-)-II. Reduction of (-)-II in THF with LiAlH ₄ gave active 4,3-PhCH ₂ O(HOCH ₂)-C ₆ H ₃ CH(OH)CH ₂ N(CH ₂ Ph)Bu-tert which was debenzylated by hydrogenation on Pd-C to give (+)-I. Similarly prepared was (-)-I. Compositions for tablets and aerosol prepns. were reported.			

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(FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

FILE 'CAPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005

L1 0 S SALBUTAMONE

FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005

E SALBUTAMONE/CN

L2 1 S E2

E SALBUTAMOL/CN

L3 1 S E3

FILE 'CAPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005

L4 5 S L2 AND L3

FILE 'REGISTRY' ENTERED AT 12:06:44 ON 07 DEC 2005

E LEVOSABUTAMOL/CN

L5 1 S E4

FILE 'CAPLUS' ENTERED AT 12:07:18 ON 07 DEC 2005

FILE 'REGISTRY' ENTERED AT 12:07:20 ON 07 DEC 2005

FILE 'CAPLUS' ENTERED AT 12:07:33 ON 07 DEC 2005

L6 19 S L5/P

L7 37 S HYDROGENATION

L8 169937 S HYDROGENATION

L9 2 S L8 AND L6

L10 66908 S RHODIUM

L11 66644 S PHOSPHINE

L12 20 S L11 AND L10

L13 0 S L12 AND L6

=> d 19 bib abs 1-2

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:291042 CAPLUS

DN 140:303395

TI Procedure for the preparation of (R)-salbutamol by asymmetric hydrogenation of salbutamol using rhodium and chiral divalent phosphine catalysts

IN Kreye, Paul; Lehnhart, Alfons; Klingler, Franz Dietrich

PA Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany

SO Ger., 6 pp.

CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10249576	B3	20040408	DE 2002-10249576	20021024
	CA 2503439	AA	20040506	CA 2003-2503439	20031018
	WO 2004037767	A1	20040506	WO 2003-EP11583	20031018
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 EP 1585718 A1 20051019 EP 2003-773653 20031018
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 US 2005009926 A1 20050113 US 2003-692060 20031023
 PRAI DE 2002-10249576 A 20021024
 US 2003-499514P P 20030902
 WO 2003-EP11583 W 20031018

OS CASREACT 140:303395

AB (R)-salbutamol (levosalbutamol) was prepared by asym. **hydrogenation** of salbutamol (4-hydroxy-3-hydroxymethylphenyl tert-butylaminomethyl ketone) using rhodium and chiral divalent phosphine catalysts. Thus, a mixture of salbutamol, Et₃N, (RhCODCl)₂, and (2R,4R)-4-dicyclohexylphosphino-2-diphenylphosphinomethyl-N-methylaminocarbonylpyrrolidine in MeOH/PhMe was stirred 23 h at 50° under 20 bar H₂ to give 90% (R)-salbutamol in 70% enantiomeric excess.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1972:59211 CAPLUS
 DN 76:59211
 TI Optical enantiomers of α -tert-butylaminomethyl-4-hydroxy-m-xylylene- α, α' -diol
 IN Middlemiss, David
 PA Allen and Hanburys Ltd.
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2128258	A	19711223	DE 1971-2128258	19710607
	DE 2128258	C2	19830811		
	GB 1298494	A	19721206	GB 1970-29367	19700617
	IL 36927	A1	19740114	IL 1971-36927	19710520
	CA 984854	A1	19760302	CA 1971-113450	19710520
	ZA 7103298	A	19720126	ZA 1971-3298	19710521
	BE 768120	A1	19711206	BE 1971-104266	19710604
	ES 392008	A1	19740801	ES 1971-392008	19710607
	JP 55025181	B4	19800704	JP 1971-40262	19710609
	AT 309403	B	19730827	AT 1971-5101	19710614
	DK 130920	B	19750505	DK 1971-2940	19710616
	NL 7108368	A	19711221	NL 1971-8368	19710617
	NL 173635	B	19830916		
	NL 173635	C	19840216		
	FR 2100772	A5	19720324	FR 1971-22011	19710617
	FR 2100772	B1	19750606		
	CH 553746	A	19740913	CH 1971-8862	19710617
PRAI	GB 1970-29367	A	19700617		

AB The optical enantiomers of the title compound 4,3-HO(HOCH₂)C₆H₃-CH(OH)CH₂NHBu-tert (I), useful as adrenergic β -receptor stimulating agents, were prepared by resolution of 4,3-PhCH₂-(MeO₂C)C₆H₃CH(OH)CH₂N(CH₂Ph)Bu-tert (II) with O,O'-di-p-toluyltartaric acid (III), fractional crystallization of the salt, and reduction and catalytic debenzylation of the base. Thus, reaction of 30 g racemic II and 25.6 g (+)-III in AcOEt at 70° gave 27 g (+)-salt, which was converted with NaHCO₃ into 3 g (-)-II. Reduction of (-)-II in THF with LiAlH₄ gave active 4,3-PhCH₂(HOCH₂)-C₆H₃CH(OH)CH₂N(CH₂Ph)Bu-tert which was debenzylated by **hydrogenation** on Pd-C to give (+)-I. Similarly prepared was (-)-I. Compositions for tablets and aerosol preps. were reported.

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(FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

FILE 'CPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005
L1 0 S SALBUTAMONE

FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005
L2 1 S E2
E SALBUTAMONE/CN
L3 1 S E3
E SALBUTAMOL/CN

FILE 'CPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005
L4 5 S L2 AND L3

=> d bib abs 1-5

L4 ANSWER 1 OF 5 CPLUS COPYRIGHT 2005 ACS on STN
AN 2001:800420 CPLUS
DN 136:205577
TI Two-dimensional TLC method for identification and quantitative analysis of salbutamol and related impurities in pharmaceutical tablet formulation
AU Aboul-Enein, Hassan Y.; Abu-Zaid, Suhair
CS Pharmaceutical Analysis Laboratory, Biological and Medical Research Department (MBC-03), King Faisal Specialist Hospital and Research Centre, Riyadh, 11211, Saudi Arabia
SO Analytical Letters (2001), 34(12), 2099-2110
CODEN: ANALBP; ISSN: 0003-2719
PB Marcel Dekker, Inc.
DT Journal
LA English
AB A rapid and sensitive TLC method was developed and validated for the anal. of salbutamol and identification of its related impurities compds. Spectro-densitometric scanning-integration was performed at an absorbance wave length of 254 nm. To justify the suitability of the proposed method, accuracy, precision and recovery studies were performed at three selected concns. levels. The recovery data reveals that the RSD for intra-day and inter-day anal. were found to be 4.86 and 1.23%, resp. A TLC plastic plate precoated with silica gel was used as the stationary phase. The solvent system was acetonitrile: methanol: ammonium hydroxide (10: 85: 5 volume/volume/v) gave a dense and compact spots of salbutamol and related impurities compds. namely: iso-Pr salbutamol, desoxy salbutamol base, salbutamol ketone hydrochloride and 5-formyl saligenin salbutamol with a Rf values of 0.1, 0.26, 0.35, 0.54 and 0.75 resp. The calibration plots exhibited good linear relationship ($r = 0.9996$) over a concentration range of 5-25 mg/mL. Statical anal. proved that the proposed method is accurate and reproducible. The method is stability indicating and being economical can be employed for the routine anal. of the bulk material of salbutamol and its pharmaceutical tablets formulations.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CPLUS COPYRIGHT 2005 ACS on STN
AN 2000:283060 CPLUS
DN 133:94663
TI Analysis of salbutamol and related impurities by derivative spectrometry
AU Aboul-Enein, Hassan Y.; Surmeian, Mariana
CS Bioanalytical and Drug Development Laboratory, Biological & Medical Research Department (MBC-03), King Faisal Specialist Hospital and Research Center, Riyadh, 11211, Saudi Arabia
SO Archiv der Pharmazie (Weinheim, Germany) (2000), 333(4), 75-78
CODEN: ARPMAS; ISSN: 0365-6233

PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB UV derivative spectrometry has been proposed for the anal. of salbutamol and related impurities. The assay of salbutamol aldehyde, 5-formylsaligenin, and salbutamol ketone was performed in sodium hydroxide 0.1 mol/L solns., using first and second derivative spectra. The method was applied for the assay of related impurities of com. samples of salbutamol sulfate.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:355227 CAPLUS
DN 125:67971
TI HPLC versus SFC for the determination of salbutamol sulfate and its impurities in pharmaceuticals
AU Bernal, J. L.; del Nazal, M. J.; Velasco, H.; Toribio, L.
CS Dep. Analytical Chem., Faculty Sci., Univ. Valladolid, Valladolid, E-47005, Spain
SO Journal of Liquid Chromatography & Related Technologies (1996), 19(10), 1579-1589
CODEN: JLCTFC; ISSN: 1082-6076
PB Dekker
DT Journal
LA English
AB A method to determine salbutamol sulfate and six impurities: 5-formyl-saligenin, salbutamol ketone, salbutamol bis-ether, isopropylsalbutamol, desoxysalbutamol sulfate and salbutamol aldehyde using reversed-phase HPLC with diode array detection is proposed. The best separation was achieved using a gradient of 0.1M ammonium acetate pH 3.0 and MeCN. When the procedure was applied to the anal. of tablets and cough syrups, the versatility of the HPLC method was higher than one based on supercrit. fluid chromatog. (SFC). When using the latter method the excipient interfered in the identification and quantification of some compds. in cough syrup samples.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:114982 CAPLUS
DN 124:212236
TI Separation of salbutamol and six related impurities by packed column supercritical fluid chromatography
AU Bernal, J. L.; del Nozal, M. J.; Rivera, J. M.; Serna, M. L.; Toribio, L.
CS Dep. Analytical Chem., Univ. Valladolid, Valladolid, 47005, Spain
SO Chromatographia (1996), 42(1/2), 89-94
CODEN: CHRGB7; ISSN: 0009-5893
PB Vieweg
DT Journal
LA English
AB Rapid separation of salbutamol sulfate and 6 related impurities: 5-formyl-saligenin, salbutamol ketone, salbutamol bis-ether, iso-Pr salbutamol, deoxysalbutamol sulfate and salbutamol aldehyde, was achieved by employing packed column supercrit. fluid chromatog. The effects of temperature, pressure, additive concentration and identity on retention were studied.
The use of a basic additive is necessary in order to elute the compds. and improve the peak shape. The best results were obtained by using a diol column and a gradient of modifier (methanol with 0.5% of n-propylamine).

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:492010 CAPLUS
DN 121:92010
TI Enantiomeric separation of salbutamol and related impurities using capillary electrophoresis

AU Rogan, Manus; Altria, Kevin D.; Goodall, David M.
CS Respiratory Analysis Dep., Glaxo Group Res., Ware/Hertfordshire, UK
SO Electrophoresis (1994), 15(6), 808-17
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AB The enantiomeric resolution of salbutamol and its chiral and achiral related impurities is investigated using capillary electrophoresis. The effects of 9 varieties of cyclodextrin, cyclodextrin concentration and organic modifier concentration were studied in an attempt to resolve all possible analytes in a complex mixture of salbutamol-related solutes. Eleven components including 3 enantiomeric pairs were baseline resolved using 112 mM dimethyl- β -cyclodextrin at pH 2.5 in a citric acid/phosphate buffer. Both MeOH and iso-PrOH at up to 20% had deleterious effect on the separation. Binding consts. and mobility values for the free and complexed forms of each solute were determined. The results are interpreted by considering the phys. properties of the mols. under the conditions employed and a rationale proposed for the underlying basis for chiral and achiral selectivity.

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